HISTORY OF THE EDGEWOOD AREA, ABERDEEN PROVING GROUND, MD

Pre-World War I

The site of Edgewood Area, Aberdeen Proving Ground is Gunpowder Neck, a peninsula created by the Bush and Gunpowder Rivers. Prior to World War I, Gunpowder Neck, the site of Edgewood Arsenal, had been a peaceful rural tract before its acquisition by the Army. At the time of the settlement of the eastern seaboard by European colonists in the 17th century, its twenty square miles, stretching between the Bush River and the Gunpowder rivers into the Chesapeake Bay, were part of the territory of the Susquehanna Indians. Captain John Smith was the first explorer to sight the region in the course of an investigation of the Chesapeake Bay about 1606. Subsequently it was included in the proprietary colony of Maryland, bestowed by King Charles I on Lord Baltimore. The proprietor granted a large area, which included Gunpowder Neck, to Thomas O'Daniel, who led a group of settlers to his acquisition.

George Cadwalader

In the middle of the 19th century, the greater part of the peninsula passed into the hands of Major General George Cadwalader, who constructed a mansion on Maxwell Point. At the beginning of the Civil War, the railroad bridge over the Gunpowder River was burned by Southern sympathizers to prevent Union troops from entering Baltimore. In 1864, Confederate Major Harry Gilmor partially burned the Gunpowder River and skirmished with a small Union infantry force protecting the bridge. After the war, farming and duck hunting resumed their place as the chief concerns of the Gunpowder Neck area for the next half-century.

World War I

In April 1915, two years before the United States entered the war, the Germans initiated large scale chemical warfare in an effort to break the Allied lines at Ypres, Belgium and win the war. The attempt failed, and soon, both sides escalated the use of chemical weapons. Yet in April 1917, when the United States joined the Allies, the U.S. Army had no training or equipment to fight a chemical war.

To obtain the necessary chemical munitions, the Army first required a site for a chemical shell filling plant. In late 1917, President Woodrow Wilson approved Gunpowder Neck as the site for the plant. Soon the quiet fields and woods gave way to a massive government construction project. The Army initially constructed temporary labor camps for the large influx of construction workers.

During one of the coldest winters on record, these workers began construction of what was called Gunpowder Neck Reservation and later Edgewood Arsenal. By late spring 1918, completed permanent buildings stood where only a few months before were wheat fields. The central powerhouse of the No. 1 Shell Filling Plant was one of the first

Shell Filling Plant No. 1 and Shell Dump

permanent buildings completed and still stands today (E5126). With no previous experience, Army engineers designed and constructed this plant from scratch. Shell Filling Plant No. 1 became operational in April 1918, only five months after it was started. Within a short time, 75mm chemical filled shells were being painted and readied for shipping in the shell dumps across the street from the plant (E5179, E5165, E5158). The Army later completed two additional shell-filling plants to fill various caliber artillery shells with chemical agents.

The Mustard Plant

The Army also decided to build four chemical production plants. Once again, with very little experience, these enormous plants were designed and built to produce large amounts of chemical agents. Portions of these plants still remain today. In addition to the chemical production and shell filling operations, the post also completed a small chemical laboratory.

Due to the dangers of chemical agents, the World War I chemical filling and production plants were run by military. Despite having very little knowledge or experience in running these plants, out of 7,000 military assigned to the post, only three soldiers died at Edgewood Arsenal during the war from chemical agent exposure.

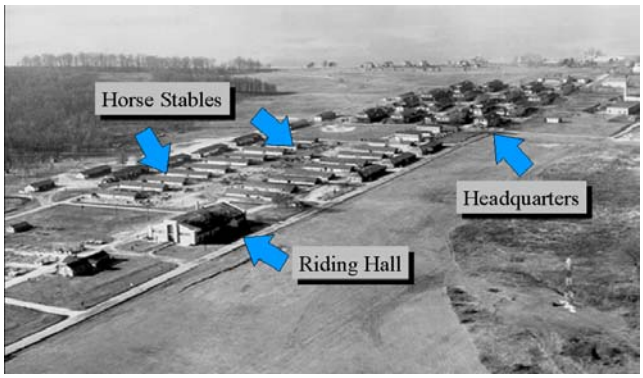
With a growing post, the Army also constructed a 314-bed hospital complex near the Edgewood Road gate. Most of the patients in the hospital suffered from influenza. At one time during the war, there were as many as 1,300 patients, many having to lay in corridors. Some 200 soldiers died from disease at Edgewood Arsenal during the war.

Although most of the troops working in the plants continued to live in the temporary wooden barracks, the Army completed 16 permanent two-story troop barracks for enlisted men. Many of the officers lived in the abandoned farmhouses spread throughout the post.

By the end of World War I, the post had filled almost 600,000 artillery shells, most of which arrived too late in the war to be used. Still, the soldiers of Edgewood Arsenal, and its parent organization, the Chemical Warfare Service, enjoyed the Armistice Day activities in November 1918 with pride.

Between the Wars

After the end of World War I, Edgewood Arsenal was demobilized and the troop barracks area became the home of a small but energetic group of chemical soldiers. Due to the reduced size of the command, a portion of Edgewood Arsenal was turned over to the 6th Field Artillery Regiment in 1922 and designated Fort Hoyle. Fort Hoyle added horse stables to the area just east of the permanent troop barracks. In 1938, the post also constructed a large stone riding hall. The riding hall was converted to a gymnasium during World War II and was later designated Hoyle Gymnasium.



Fort Hoyle

The Headquarters of Fort Hoyle was Building E4405, the current post library building across from the Recreation Center. Fort Hoyle remained a separate facility until 1940 when the land was returned to Edgewood Arsenal control.

While Fort Hoyle was in existence, the headquarters of Edgewood Arsenal was the former hospital administration building on Wise Road (E1675). During the 1920s, the Army constructed additional officer housing across from the Edgewood Arsenal headquarters for the Chemical Warfare Service and near the old Officers Club (E4650) for Fort

Hoyle. Edgewood Arsenal during the 1920s and 1930s became a chemical research, development and training facility. Its main laboratory was a two-story building that originally stood in the grassy field across Fleming Road from Building E5101.

Old Edgewood Arsenal Headquarters

Most of the research work of Edgewood Arsenal involved improving protective masks for troops and developing the 4.2-inch chemical mortar, the main offensive weapon of the Chemical Warfare Service. The filling plants were placed on standby, and little agent production work was completed.

The Chemical Warfare School, established at Lakehurst Proving Ground, New Jersey, in 1920, moved to Edgewood Arsenal in 1921. The school moved several times around the post, but finally settled in two classroom buildings near the Arsenal's headquarters building.

During the 1930s, a small portion of land near the south end of the current runway was set aside as a Civilian Conservation Corps camp. These workers, hired by the U.S. Government to relieve unemployment during the Great Depression, helped construct some of the buildings on post and improved the test ranges.

Edgewood Arsenal also improved the living conditions of the troops stationed here. A post theater, currently designated the Conference Center (E4810), was completed in 1934. Other improvements included a swimming pool and new noncommissioned officers housing near the north end of the airfield.

World War II

With the onset of World War II in Europe in 1939 and the potential for a second chemical war, Edgewood Arsenal found its agent production and filling plants outdated and in poor condition. By 1942, after the United States entered the war, new construction corrected that situation. The old Edgewood Arsenal became the new Chemical Warfare Center. A new arsenal operations building, designated Building 1 and later E5101, housed a workforce that oversaw a tremendous production and logistical support operation to get the best chemical equipment and munitions to the field in case of chemical warfare. This involved shipping all kinds of equipment and supplies to all parts of the world. For example, the incendiary bombs dropped by Lieutenant Colonel James H. Doolittle during his famous 1942 raid on Tokyo were produced at the Center.

Prior to the war, a portion of the old World War I chlorine plant became the Army's gas mask factory. This plant produced many of the masks used by the Army during the war. Civilians, the majority being women, accomplished most production work. The peak civilian strength of the post was 8,800 in 1943.

The Chemical Warfare Service's Technical Command, headquartered in the arsenals new laboratory building (E3330), became the center of chemical research and development. The Technical Command oversaw the development of such items as the protective masks carried by troops landing in France on D-Day, the smoke generators used to screen troops at Anzio, the flamethrowers that were used to destroy Japanese bunkers throughout the Pacific, and the highly acclaimed 4.2-inch chemical mortar, designed for chemical shells, but used quite successfully with smoke, incendiary, and high explosive rounds.

World War II Laboratory Building

The post also added a new Medical Research Building (E3220). The Medical Research Division oversaw the studies to analyze the effects of all known chemical agents on the human body and developed techniques used in the medical community today.

Chemical Warfare School Addition

The Chemical Warfare School expanded its facility by connecting the two small school buildings with a new central portion (E1570). The field behind the new school building was used as a training field. Today, this field is part of the Golf Course. The school also set up a live agent gas obstacle course west of Reardon Inlet for realistic chemical warfare training. During the war, the school trained over 21,600 troops in all aspects of chemical warfare.

To handle the enormous influx of military personnel during the war, the Center constructed numerous two-story wooden troop barracks in the area just south of the existing World War I barracks. Several of these barracks were used to house about 600 German prisoners who helped with administrative and manual jobs during the war.

One significant accident occurred during the war. On May 25, 1945, there was a major explosion in Building E5158, an incendiary assembly plant. This explosion killed 12 workers, all women, sent 16 to the hospital, and heavily damaged the plant. The exact cause of the explosion was never determined but was attributed to an assembly line accident that ignited stacked combustibles.

Overall, the Chemical Warfare Center contributed much to the success of the war. Although chemical agents were not used against the United States during the war, the Army was prepared to fight a chemical war and the Center received several well-earned national awards.

The conclusion of World War II resulted in another major demobilization of the post. The chemical research and development mission, however, remained centered in E3330, the arsenal mission in E5101, and the post headquarters in E1675.

Post World War II

In 1946, the Chemical Warfare Service became the Chemical Corps and the Chemical Warfare Center was renamed the Army Chemical Center. The Center took on two new major challenges after the war. The first was the radiological mission. The Chemical Corps organized a Radiological Division to concentrate on various aspects of nuclear war. The division eventually became the Nuclear Defense Laboratories before moving to the Aberdeen Area in the 1970s.

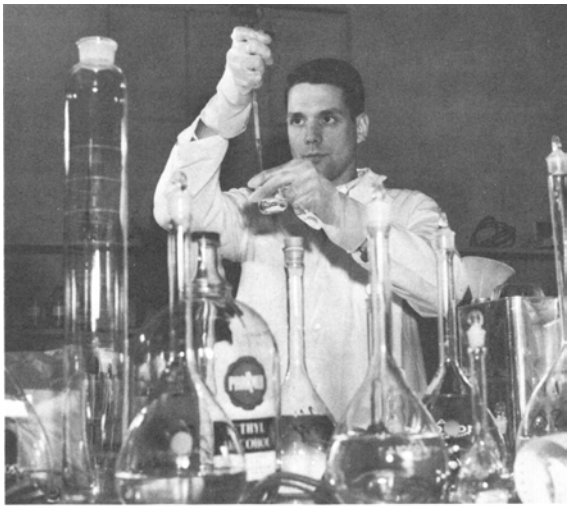
The second new challenge involved nerve agents, developed shortly before World War II by the Germans, but not analyzed by the Allies until after the war. These lethal agents required the development of a new generation of munitions, protective masks, protective clothing, and detection systems.

During the early 1950s, the Army Chemical Center supported the Korean War by providing flame and incendiary weapons. Napalm, a World War II development, proved particularly effective in stopping Russian tanks due to its ability to knock out a tank without requiring a direct hit. The 4.2-inch mortar also saw extensive use supporting infantry positions.

Following the Korean War, the Center benefited from the heyday of the Chemical Corps during the 1950s and 1960s. The technological work of the Center included everything from a civilian protective mask for adults to bombs for

The New Headquarters Building

jet aircraft and chemical warheads for many different missiles and rockets. The Chemical School grew such that it moved to Fort McClellan, Alabama, in 1951. The Center also outgrew Building E1675 and moved its headquarters to E5101 in 1956.



1960's - Chemist in Laboratory

In 1962, the Chemical Corps was abolished as a separate headquarters and the Center merged into the new Army Materiel Command (AMC). A year later, the post again changed its name back to Edgewood Arsenal. Three years later, Edgewood Arsenal was designated the Army's chemical commodity center.

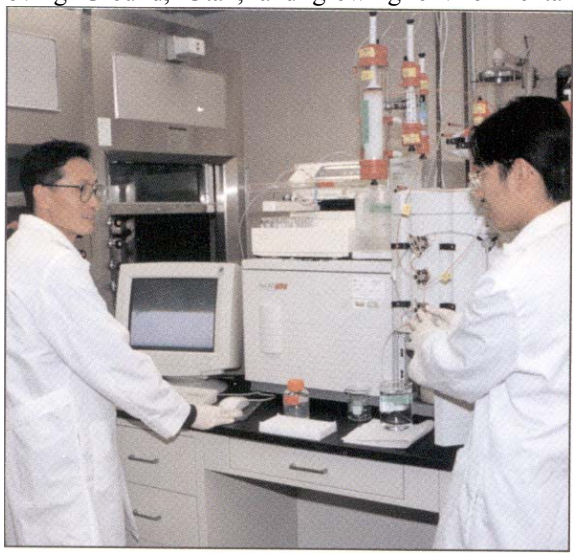
The 1950s-60s saw the construction of several new laboratory facilities around the post. The Amos A. Fries Laboratory (E3300) was built in 1963 for advanced studies of chemical compounds, radioactive materials, and toxins. The U.S. Army Environmental Hygiene Agency Laboratory (E2100) was constructed in 1967. The John R. Wood Laboratory (E3100) was finished in 1968. The Harry C. Gilbert Laboratory (E5100) was dedicated in 1969 as a quality assurance chemical testing laboratory.

The arsenal also began replacing its World War I and World War II troop barracks with newer units in 1962. These barracks were constructed on the site of Fort Hoyle's horse stables. A year later, the arsenal completed a new dispensary across from the troop barracks.

The small wooden frame World War II chapel built in 1941 on Austin Road was replaced by a new larger brick chapel (E4670) in 1963. The older chapel was later removed. The old enlisted men's service club on the corner of Hoadley and Austin Roads was also replaced by the new brick Stark Service Club (E4140), now referred to as the Recreation Center, in 1960.

Edgewood Arsenal provided extensive support to the growing conflict in Vietnam throughout the 1960s and early 1970s. The arsenal provided many non-lethal riot control devices and designed a new lightweight protective mask for the troops. Flame and incendiary research played a critical role in support of the war. The post also studied wound ballistics during this time. This support of the unpopular war drew protesters to the front gate more than once.

The image of the Army's chemical warfare program took a severe beating in 1969 after a widely publicized chemical testing incident at Dugway Proving Ground, Utah, and growing environmental concerns over the land movement and sea dumping of old chemical munitions. The resulting Congressional concern with the chemical program and public opposition was reflected in reduced budgets and personnel cutbacks.

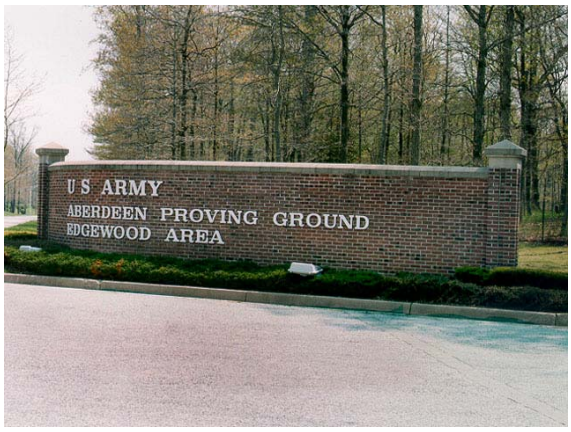


2000's – Biotechnology Laboratory

In 1971, the post became a portion of Aberdeen Proving Ground (APG). Edgewood Arsenal (the installation) became the Edgewood Area of APG. Edgewood Arsenal (the organization) continued to exist and used E5101 as its headquarters. In 1977, however, Edgewood Arsenal (the organization) was broken up and its mission and personnel assigned to various new, smaller organizations.

During the 1980s, a number of tenant organizations utilized the Edgewood Area. The former Chemical Corps Medical Research Division was assigned to the Surgeon General and became the Army Medical Research Institute of Chemical Defense. The Army Environmental Hygiene

Agency continued its work on preventive medicine and all occupational and environmental health disciplines. The Toxic and Hazardous Materials Agency, an activity of the Corps of Engineers, concentrated on installation and environmental restoration. The Chemical Research, Development and Engineering Center continued the original Edgewood Arsenal mission of developing chemical equipment for the Army. The Program Manager for Chemical Demilitarization received the challenging assignment to dispose of the aging chemical stockpiles. Other tenants included the Maryland Army National Guard, the Technical Escort Unit, and the Program Manager for Rocky Mountain Arsenal.



The Edgewood Area Front Gate

The 1980s saw the construction of several new facilities in the Edgewood Area. New troop barracks were constructed adjacent to the original World War I barracks. A new National Guard Armory was constructed on the site of the World War II prisoner of war camp. The Ordnance School and Center built a new training facility (E4301) just south of the National Guard Armory. The Bernard Berger Laboratory (E3549) was dedicated in 1989 and is used for chemical defense work. The new Skippers Point family housing also helped alleviate a shortage of appropriate housing for military families.

Shortly after the beginning of Operation Desert Shield in August 1990, the Edgewood organizations were quickly at work ensuring that the Army was ready in case the Iraqis used their chemical weapons. This support included everything from deploying troops to supplying chemical equipment and medical studies.

Additional tenant name changes took place during the 1990s. The Chemical Research, Development and Engineering Center was replaced by the Chemical and Biological Defense Command (CBDCOM) and later the Soldier and Biological Chemical Command (SBCCOM). The Toxic and Hazardous Materials Agency became the Army Environmental Center. The Army Environmental Hygiene Agency became the Center for Health Promotion and Preventive Medicine (CHPPM).

Prepared by:

Jeffery K. Smart, Command Historian
Historical Research and Response Team
Aberdeen Proving Ground, MD 21010-5424